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AMERICAN SERIES.

I.

1. HISTORICAL INTRODUCTION TO STUDIES
AMONG THE SEDENTARY INDIANS OF
NEW MEXICO.
2. REPORT ON THE RUINS OF THE PUEBLO
OF PECOS.

BY

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I.

HISTORICAL INTRODUCTION

TO

STUDIES AMONG THE SEDENTARY INDIANS

OF

NEW MEXICO.

PART I.

By AD. F. BANDELIER.

I.

HISTORICAL INTRODUCTION.

PART I.

THE earliest knowledge of the existence of the sedentary Indians in New Mexico and Arizona reached Europe by way of Mexico proper; but it is very doubtful whether or not the aborigines of Mexico had any *positive* information to impart about countries lying north of the present State of Querétaro. The tribes to the north were, in the language of the valley-confederates, "Chichimecas," — a word yet undefined, but apparently synonymous, in the conceptions of the "Nahuatl"-speaking natives, with fierce savagery, and ultimately adopted by them as a warlike title.

Indistinct notions, indeed, of an original residence, during some very remote period of time, at the distant north, have been found among nearly all the tribes of Mexico which speak the Nahuatl language. These notions even assume the form of tradition in the tale of the *Seven Caves*,¹ whence the Mexicans and the Tezcucans, as well as the Tlaxcaltecs, are said to have emigrated to Mexico.² Perhaps the earliest mention

¹ *Las siete cuevas*: in Nahuatl *Chicomoztoc*, from *chicome*, seven, and *oztoc*, cave. Alonzo de Molina, *Vocabulario Mexicano*, 1571, parte iia. pp. 20 and 78. Fray Juan de Tobar, *Codice Ramirez*, p. 18.

² Fray Diego Durán, *Historia de las Yndias de Nueva-España, é Islas de Tierra Firme*, cap. i. p. 8; *Codex Vaticanus*, Kingsborough, vols. i., ii., vi.; *Anales de Cuauhtitlan*: *Anales del Museo Nacional de México*, tom. i. entrega 7, p. 7 of 2d vol., but incorporated in the first. "1 acatl ipan quizque Chicomoztoc in Chichimeca omitoa moternuh in imitoloca."

of this tradition may be found in the writings of Fray Toribio de Paredes, surnamed Motolinia. It dates back to 1540 A.D.¹ But it is not to be overlooked that ten years previously, in 1530, the story of the *Seven Cities*, which was the form in which the first report concerning New Mexico and its sedentary Indians came to the Spaniards, had already been told to Nuño Beltran de Guzman in Sinaloa.² The parallelism between the two stories is striking, although we are not authorized to infer that the so-called seven *cities* gave rise to what appeared as an aboriginal myth of as many *caves*.³

The tale of the Seven Caves, as the original home of the Mexicans and their kindred, prevailed to such an extent that, as early as 1562, in a collection of picture-sheets executed in aboriginal style, the so-called "Codex Vaticanus," "Chicomoztoc," and the migrations thence, were graphically represented. All the important Indian writers of Mexico between 1560 and 1600, such as Duráro, Camargo, Tezozomoc, and Ixtlilxochitl, refer to it as an ancient legend, and they locate the site of the story, furthermore, very distinctly in New Mex-

¹ *Historia de los Indios de la Nueva-España*, in *Coleccion de Documentos para la Historia de México*, by J. G. Icazbalceta, vol. i. p. 7.

² *Segunda Relacion Anónima de la Jornada de Nuño de Guzman*, in *Coleccion de Documentos*, etc., vol. ii. p. 393.

³ The early literature on this subject will only be fully known when the remarkable collection called *Libro de Oro* shall have been published by Señor Icazbalceta, its meritorious owner. This valuable collection of manuscripts dates from the sixteenth century, and contains, besides a number of official reports on local matters of Mexico and districts pertaining to it, the chronicles of the tezcucan Juan Bautista Pomar, a copy of Motolinia, and a number of MSS. written between 1529 and 1547 at the instance of the much-abused Bishop Zumárraga. These MSS. contain the results of the earliest investigations on Mexican history and tradition.

The natives of Mexico appear to have had no knowledge, nay, not even the most dim recollection, of the *fauna* of South-western North America. While their so-called calendar, in the graphic tokens used to designate each one of the twenty days of their conventional "month," contains the forms of all the larger quadrupeds roaming over Mexico and Central America, the tapir excepted, we look in vain for the coyote, the bear, the mountain-sheep, and the buffalo.

ico. Even the "Popol-Vuh," in its earliest account of the Quiché tribe of Guatemala, mentions "Tulan-Zuiva, the seven caves or seven ravines."¹

While it is impossible as yet to determine whether or not this legend exercised any direct influence on the extension of Spanish power into Northern Mexico, another myth, well known to eastern continents from a remote period, became directly instrumental in the discovery of New Mexico. This is the tale of the *Amazons*.

About 1524 A.D., Cortes was informed by one of his officers (then on an expedition about Michhuacan) that towards the north there existed a region called Ciguatan ("Cihuatlán" — place of women), near to which was an island inhabited by warlike females exclusively.² The usual exaggerations about metallic wealth were added to this report; and when, in 1529, Nuño de Guzman governed Mexico he set out northwards, first to conquer the sedentary Indians of Michhuacan, and then to search for the gold and jewels of the Amazons.³ It was while on this foray that he heard of the Seven Cities in connection with Ciguatan. This latter place was reached; and, while the fancies concerning it were speedily dispelled by reality, those concerning the Seven Cities flitted further

¹ *Popol Vuh*, part iii. cap. iv. p. 216, cap. vi. pp. 226, 228, cap. viii. p. 238, etc.

² Hernando Cortés, *Carta Cuarta*, dated Temixtitán, 15 October, 1524, Vedia i. p. 102. Gonzalo Fernandez de Oviedo y Valdés, *Historia General y Natural de las Indias*, lib. xxxiii. cap. xxxvi. vol. iii. p. 447, lib. xxxiv. cap. viii. p. 576, Madrid, 1853. The information was derived from Gonzalo de Sandoval. See Antonio de Herrera, *Historia General de los Hechos de los Castellanos en las Islas y Tierra Firme del Mar Oceano*, dec. iii. lib. iii. cap. xvii. p. 106, edition of 1726.

³ *Relacion de las Ceremonias y Ritos, Poblacion y Gobierno de los Indios de la Provincia de Mechhuacan*, p. 113, from the *Coleccion de Documentos para la Historia de la España. Tercera Relacion Anónima de la Jornada de Nuño de Guzman*, *Coleccion de Documentos*, Icazbalceta, ii. pp. 443, 449, 451. *Matias de la Mota Padilla, Historia de la Nueva-Galicia*, published 1870, cap. iii. p. 27. Oviedo, lib. vi. cap. xxxiii. vol. i. pp. 222, 223.

north.¹ Guzman overran, laid waste, and finally colonized Sinaloa. He sent parties into Sonora; but, after his recall, slow colonization superseded military forays on a large scale, at least for a few years.

During this time, Pamfilo de Narvaez had undertaken the colonization of Florida.² His scheme failed, and cost him his life. Of the few survivors of his expedition, four only remained in the American continent, wandering to and fro among the tribes of the south-west. After nine years of untold hardships, these four men finally reached Sonora, having traversed the continent, from the Gulf of Mexico to the coast of the Pacific. The name of the leader and subsequent chronicler of their adventures was Alvar Nuñez Cabeza de Vaca.³

It is not possible to follow and to trace, geographically, the erratic course of Cabeza de Vaca with any degree of certainty. His own tale, however authentic, is so confused⁴ that it becomes utterly impossible to establish any details of location. We only know that, in the year A.D. 1536, he and his associates finally met with their own countrymen about Culiacan.⁵

¹ *Quarta Relacion Anónima de la Jornada de Nuño de Guzman, Coleccion de Documentos*, Icazbalceta, ii. p. 475. Oviedo, lib. vi. cap. xxxiii. vol. i. p. 223.

² In 1527, Herrera, dec. iv. lib. ii. cap. iv. pp. 26, 27.

³ He was treasurer of Narvaez' expedition, and subsequently, upon his return, or rather in 1541, became *adelantado* of Paraguay.

⁴ He wrote all from memory. The title of his work is *Naufraios de Alvar Nuñez Cabeza de Vaca, y Relacion de la Jornada que hizo á la Florida*. It was first printed in 1555, at Valladolid. My references are to the reprint in Vedia's *Historiadores Primitivos de Indias*, vol. i.

⁵ Cabeza de Vaca, *Naufraios*, etc., cap. xxxvii. p. 548, xxxiv. p. 545. According to Herrera, dec. vi. lib. i. cap. vii. p. 11 and cap. viii. p. 11, it might be either 1536 or 1534, "el año pasado de 1534. Oviedo, lib. xxxv. cap. vi. p. 614, intimates as much as 1538. Fray Antonio Tello, *Historia de la Nueva-Galicia*, fragment preserved in *Coleccion de Documentos*, Icazbalceta, ii. cap. xii. p. 358, says "habian llegado ese año de treinta y tres á aquellas tierras," 1533.

They reported that, when their shiftings had cast them far to the west of the sinister coast of what was then called "Florida," settlements of Indians were reached which presented a high degree of culture.¹ These settlements they described as having a character of permanence, but we look in vain for any accurate description of the buildings, or of the material of which they were composed.² For such a report of important settlements in the north, the mind of the Spanish conquerors in Mexico was, as we have already intimated, well prepared.

During their stay among the nondescript tribes of South-western North America, Cabeza de Vaca and his companions had tried to scatter the seeds of Christianity, — at least, they claimed to have done so. The monks of the order of St. Francis then represented the "working church" in Mexico. One of their number, Fray Marcos de Nizza, who had joined Pedro de Alvarado upon his return from his adventurous tour to Quito in Ecuador, and who was well versed in Indian lore,³ at once entered upon a voyage of discovery, determining to go much farther north than any previous expedition from the colonies in Sinaloa. He took as his companion the negro Estevanico, who had been with Cabeza de Vaca on his marvellous journey.

Leaving San Miguel de Culiacan on the 7th of March,

¹ Cabeza de Vaca, cap. xxxi. pp. 542, 543.

² Id., p. 543.

³ He was a native of Savoy, Italy, and was with Sebastian de Belalcazar during the latter's conquest of Quito. Juan de Velasco, *Histoire du royaume de Quito*, French translation by Ternaux-Compans, Introd. p. viii. He wrote the following books: *Conquista de la Provincia del Quito: Ritos y Ceremonias de los Indios*; *Las dos Lineas de los Incas y de los Scyris en las Provincias del Perú y del Quito*; *Cartas Informativas de lo Obrado en las Provincias del Perú y del Cuzco*. These manuscripts may still exist. According to Fray Augustin de Vetancurt (*Menologio Franciscano*, ed. of 1871, pp. 117, 118, 119), he was born at Nizza, and in 1531 came to America, being in Peru in 1532. Thence he went to Nicaragua and Mexico. He was provincial from 1540 to 1543, and died at Mexico, March 25, 1558.

1539,¹ and traversing Petatlan, Father Marcos reached Vacapa.² If we compare his statements about this place with those contained in the diary of Mateo Mange,³ who went there with Father Kino in 1701, we are tempted to locate it in Southern Arizona, somewhat west from Tucson, in the "Piméria alta,"⁴ at a place now inhabited by the Pima Indians, whose language is also called "Cora" and "Nevome."⁵ Vacapa was then "a reasonable settlement" of Indians. Thence he travelled in a northerly direction, probably parallel to the coast at some distance from it. It is impossible to trace his route with any degree of certainty: we cannot even determine whether he crossed the Gila at all; since he does not mention any considerable river in his report, and fails to give even the direction in which he travelled, beyond stating at the outset that he went northward. Still we may suppose, from other testimony on the subject, that he went beyond the Rio Gila,⁶ and finally he came in sight of a great Indian pueblo, "more considerable than Mexico,"—the houses of stone and several stories high. The negro Estevanico had been killed at this pueblo previous to the arrival of Fray Mar-

¹ Fray Marcos Nizza, *Descubrimiento de las Siete Ciudades*, p. 329.

² Nizza, p. 332. Herrera, dec. vi. lib. vii. cap. vii. p. 156.

³ In *Documentos para la Historia de Méjico*, 1856, 4 série, vol. i. p. 327. The diary has not even a title. Mentioned by Father Jacob Sedelmair, S. J., *Relacion que hizo . . . Misionero de Tubatama*, in *Documentos para la Historia de Méjico*, 3a série, vol. ii. pp. 846, 848, 857, 859.

⁴ On the map of Father Eusebio Francisco Kino, in *Der neue Weltbott*, by P. Joseph Stöcklein, vol. i. 2d edition, 1728, there appears St. Ludov. de Bacapa. The diary of Mange, p. 327, is explicit.

⁵ Manuel Orozco y Berrá, *Geografía de las Lenguas y Carta Etnográfica de México*, part iii. cap. xxiii. pp. 345-353, etc. Francisco Pimentel, *Cuadro Descriptivo y Comparativo de las Lenguas Indígenas de México*, 1865, vol. ii. pp. 91, 92-116.

⁶ The fact that he became the guide of Coronado, and led him to Cibola, indicates that Fray Marcos crossed the Gila, since otherwise the Spaniards would have traversed the Sierra Madre, and entered New Mexico from Chihuahua. It is true that the general direction of Coronado's march from Culiacan was from south to north, inclining to the east.

cos, so the latter only gazed at it from a safe distance, and then hastily retired to Culiacan. While the date of his departure is known, we are in the dark concerning the date of his return, except that it occurred some time previous to the 2d of September, 1539.¹

To this great pueblo, "more considerable than Mexico," Fray Marcos was induced to give the name of Cibola.² The comparison with Mexico shows a lively imagination; still, we must reflect that in 1539 Mexico was not a large town,³ and the startling appearance of the many-storied pueblo-houses should also be taken into account.⁴

With the report about Cibola came the news that the said pueblo was only one of seven, and the "Seven Cities of Cibola" became the next object of Spanish conquest.

It is not our purpose here to describe the events of this conquest, or rather series of conquests, beginning with the expedition of Francisco Vasquez Coronado in 1540, and ending in the final occupation of New Mexico by Juan de Oñate in 1598. For the history of these enterprises, we refer the reader to the attractive and trustworthy work of Mr. W. W. H. Davis.⁵ But the numerous reports and other documents concerning the conquest enable us to form an idea of the ethnography and linguistical distribution of the In-

¹ The attest of D. Antonio de Mendoza, concerning Nizza's report, bears the date, Mexico, 2 Sept., 1539. Consequently, Fray Marcos had returned previously. See *Relation du Voyage de Cibola*, Ternaux-Compans, Appendix, p. 282.

² This word is said to be now found only in the dialect of the pueblo of Isleta, south of Santa Fé, under the form *sibúlodá*, buffalo. Albert S. Gatschet, *Zwölf Sprachen aus dem Südwesten Nord Amerika's*, Weimar, 1876, p. 106.

³ Herrera, *Descripción de las Indias*, cap. ix. p. 17, says that Mexico has 4,000 vecinos. This was in 1610, about.

⁴ Lewis H. Morgan, *On the Ruins of a Stone Pueblo on the Animas River*, in *12th Annual Report of the Peabody Museum of American Archaeology*, etc., 1880, p. 550.

⁵ *The Spanish Conquest of New Mexico*, Doylestown, Pa., 1869.

dians of New Mexico in the sixteenth century. Upon this knowledge alone can a study of the present ethnography and ethnology of New Mexico rest on a solid historical foundation.

There can be no doubt that Cibola is to be looked for in New Mexico. From the vague indications of Fray Marcos, we are at least authorized to place it within the limits of New Mexico or Arizona, and the subsequent expedition of Coronado furnishes more positive information.

Coronado marched — “leaving north slightly to the left”¹ — from Culiacan on. In other words, he marched east of north. Hence it is to be inferred that Cibola lay nearly north of Culiacan in Sinaloa. Juan Jaramillo has left the best itinerary of this expedition. We can easily identify the following localities: Rio Cinaloa, upper course, Rio Yaquimi, and upper course of the Rio Sonora.² Thence a mountain chain was crossed called “Chichiltic-Calli,”³ or “Red-house” (a Mexican name), and a large ruined structure of the Indians was found there.

Within the last forty years at least, this “Red house” has been repeatedly identified with the so-called “Casas Grandes,” lying to the south of the Rio Gila in Arizona.⁴ It should not be forgotten that from the upper course of the Rio Sonora *two* groups of Indian pueblos in ruins were within reach of the Spaniards. One of these were the ruins on the Gila, the other lay to the right, across the Sierra Madre, in the pres-

¹ Pedro de Castañeda y Nagera, *Relation du Voyage de Cibola*, translation of Ternaux-Compans, Paris, 1838, part ii. cap. iii. p. 163.

² Juan Jaramillo, *Relation du Voyage fait à la Nouvelle-Terre sous les Ordres du Général Francisco Vasquez de Coronado*, in *Voyage de Cibola*, Append. vi. pp. 365, 366, 367.

³ Castañeda, i. cap. ix. pp. 40, 41, ii. cap. iii. p. 162. The word is composed of *chichiltic*, a red object, and *calli*, house. Molina, ii. pp. 11, 19.

⁴ General Simpson locates the “Casas Grandes” on the Gila, in lat. 33° 4' 21" and lon. 111° 45' Greenwich. *Coronado's March*, p. 326.

twenty-five leagues also; and "Tucayan" by Jaramillo, "to the left of Cibola, distant about five days' march."¹ These seven villages of "Tusayan" were visited by Pedro de Tobar. West of them is a broad river, which the Spaniards called "Rio del Tizon."²

2. Five days' journey from Cibola to the east, says Castañeda, there was a village called "Acuco," erected on a rock. "This village is very strong, because there was but one path leading to it. It rose upon a precipitous rock on all sides, etc."³ Jaramillo mentions, at one or two days' march from Cibola to the east, "a village in a very strong situation on a precipitous rock; it is called Tutahaco."⁴

3. According to Jaramillo: "All the water-courses which we met, whether they were streams or rivers, until that of Cibola, and I even believe one or two journeyings beyond, flow in the direction of the South Sea; further on they take the direction of the Sea of the North."⁵

4. The village called "Acuco," or "Tutahaco," lay between Cibola and the streams running to the south-east, "entering the Sea of the North."⁶

It results from points 3 and 4, that the region of Cibola lay at all events *west of the present grants to the pueblo of Acoma*. There are watercourses in their north-western corner, and through the western half thereof, which become tributaries to the Rio Grande del Norte. The only settled region, or rather the region containing the remains of large settlements, lying west of the water-shed between the Colorado of the West and the Rio Grande, is much farther north.

¹ *Relation*, etc., p. 370.

² Castañeda, i. cap. xi. pp. 58, 63, 64.

³ *Relation*, i. cap. xii., pp. 69, 70; ii. cap. iii. p. 166.

⁴ *Relation*, p. 370. Castañeda, i. cap. xiii. p. 76.

⁵ *Relation*, p. 370.

⁶ Jaramillo, pp. 370 and 371.

It is the so-called San Juan district, where extensive ruins are still found, for the description of which we are indebted to General Simpson, to Messrs. Jackson and Holmes, and to Mr. Lewis H. Morgan. To reach this region, Coronado had to pass either between Acoma and Zuñi, or between the Zuñi and the Moqui towns. In either case he could not have failed to notice one or the other of these pueblos; whereas Nizza, as well as the reports of Coronado's march, particularly insist upon the fact that Cibola lay on the borders of a great uninhabited waste.

Our choice is therefore limited between Zuñi and the Moqui towns themselves; for there can be no doubt as to the identity of the rock of Acuco or Tutahaco, east of Cibola, with the pueblo of Acoma, whose remarkable situation, on the top of a high, isolated rock, has made it the most conspicuous object in New Mexico for nearly three centuries.¹

¹ Acoma is always described with particular care by the older Spanish authors. Antonio de Espejo, *Carta*, 23 April, 1584, in *Documentos Inéditos del Archivo de Indias*, vol. xv. p. 179: "Y hallamos un pueblo que se llama, Acoma, donde nos pareció, habria mas de seis mil ánimas, el cual está asentado sobre una peña alta que tiene mas de cincuenta estados en alto," etc. Juan de Oñate, *Discurso de las Jornadas que hizo el Campo de Su Magestad desde la Nueva-España á la Provincia de la Nueva-México*, *Documentos Inéditos*, vol. xvi. pp. 268, 270: "A quatro de Diciembre [1598?], lo mataron en Acoma, los Indios de aquella fortaleza, que es la mejor en sitio de toda la cristiandad . . ." "dieron el primer asalto al Peñol de Acóma . . ." *Obediencia y Vassalaje á Su Magestad por los Indios del Pueblo de Acóma*, *Documentos Inéditos*, xvi. p. 127: "Al pié de una peña muy grande sobre la qual en lo alto délla está fundado y poblado el Pueblo que llaman de Acóma, . . ." dated 27 October, 1598. Fray Agustin de Vetancurt, *Crónica de la Provincia del Santo Evangelio de México*, trat. iii. cap. vi. p. 319. "Al Oriente del Pueblo de Zia está el Peñol de Acoma, que tiene una legua en Circuito de treinta Estados de alto." *Menologio Franciscano*, p. 247. Both references are taken from the edition of 1871. Furthermore, in the anonymous *Relacion del Suceso de la Jornada que Francisco Vazquez hizo en el Descubrimiento de Cibola*, año de 1531 (should be 1541), in vol. xiv. of the *Documentos del Archivo de Indias*, we find Acuco (east of Cibola), "el cual ellos llaman en su lengua Acuco, y el padre Márcos le llamaba Hacús:" now Hacús forcibly recalls the proper name of Acoma, which by the Qq'uêres Indians, to whose stock its inhabitants belong, is called "Âgo."

But there can be as little doubt, also, in regard to the identity of the Moqui district with the "Tusayan" of Castañeda and of Jaramillo. When the Moqui region first was made known under that name ("Mohoce," "Mohace") in 1583, by Antonio de Espejo, it lay westward from Cibola "four journeys of seven leagues each." One of its pueblos was called "Aguato" ("Aguatobi").¹ Fifteen years later (1598), Juan de Oñate found the first pueblo of "Mohóce," twenty leagues of the first one of "Juñi" ("Zuñi") to the westward.² Besides, the "Rio del Tizon" was, at an early day, distinctly identified with the Colorado River of the West.³

¹ Carta, 23 April, 1584, *Documentos Inéditos*, vol. xv. p. 182.

² *Discurso de las Jornadas*, etc., *Documentos Inéditos*, vol. xvi. p. 274. *Obediencia y Vassallaje á Su Magestad por los Indios del Pueblo de San Joan Baptista*, id. vol. xv. p. 115. That the "Mohoces" were the Moqui is evidenced by Padre Geronimo de Zarate Salmeron, *Relacion de todas las Provincias que en el Nuevo-México se han visto y sabido así por Mar como por Tierra, desde el Año de 1538, hasta el Año de 1626*. *Documentos para la Historia de México*, série 3, vol. i. p. 30.

³ Castañeda, i. cap. x. pp. 49, 50. Melchor Diaz reached the Rio del Tizon, starting from Culhuacan and Sonora. This river emptied into the Gulf of California, and he found there traces of Fernando de Alarcon. The latter went up the Rio Colorado, and learned many details about Cibola from Indians living along the river. *Relation de la Navigation et de la Découverte faite par le Capitaine Fernando Alarcon, Voyage de Cibola*, Ternaux-Compans, Append. iv. cap. i. p. 302: "Nous y trouvâmes un très grand fleuve dont le courant était si rapide, qu'à peine pouvions nous nous y maintenir," cap. v. pp. 324-326; cap. vi. p. 331. Herrera, dec. vi. lib. ix. cap. xi. p. 212. Fray Juan de Torquemada, *Monarchia Indiana*, lib. v. cap. xi. p. 609, ed. of 1723. While Alarcon was endeavoring to meet Coronado by sailing or boating up the Colorado from its mouth, the latter sent Garci-Lopez de Cardenas to explore a river which the Indians of "Tusayan" had mentioned to Pedro de Tobar; and he reached this river after twenty days' march. It is described as follows by Castañeda (i. cap. xi. p. 62): "After these twenty days' marching, they indeed reached this river, whose shores are so high that they thought themselves at least three or four leagues up in the air. The country is covered with low and crippled pines; it is exposed to the north, and the cold is so severe that, although it was summer, it could hardly be supported. The Spaniards for three days marched along these mountains, hoping to find a place where they could reach the river, which, from above, appeared to be about one fathom in width, while the Indians said it was wider than one-half league; but it was found to be impossible," etc. This is a fair picture of the cañons of the Colorado River of the West, the only one emptying into the head of the Gulf of California; and Castañeda adds (p. 65): "This river was the del Tizon."

Finally, we must notice here that the text of Hackluyt's version of Espejo's report is in so far incorrect as it leads to the inference that Espejo only admitted Cibola to be a Spanish name for Zuñi, therefore making it doubtful whether or not it was the original place ("y la llaman los Españoles Cibola"). The original text of Espejo's report distinctly says, however, "a province of six pueblos, called Zuñi, and by another name, Cibola," thus positively identifying the place.¹

We cannot, therefore, refuse to adopt the views of General Simpson and of Mr. W. W. H. Davis, and to look to the pueblo of Zuñi as occupying, if not the actual site, at least one of the sites within the tribal area of the "Seven cities of Cibola." Nor can we refuse to identify Tusayan with the Moqui district, and Acuco with Acoma.

This investigation has so far enabled us to locate, at the time of their first discovery, *three* of the principal pueblos or groups of pueblos of New Mexico and Arizona. The pueblo of Acoma appears to have occupied at that time the identical striking position in which it is found to-day. The pueblo of Zuñi, while it undoubtedly occupies the ground once claimed by the cluster to which the name of Cibola was given, is but the remaining one of six or seven villages then forming that group, or a recent construction sheltering the remnants of their former occupants. The Moqui towns appear to be the same which the Spaniards found three hundred and forty years ago, though additions from other tribes have, as we

¹ *Carta, Documentos Inéditos*, vol. xv. p. 180: "Una provincia, que son seis pueblos, que la provincia llaman Zuñi, y por otro nombre Cibola. Richard Hackluyt, *The Third and last Volume of the Voyages, Navigations, Traffiques, and Discoveries of the English Nation*." *El Viaje que hizo Antonio de Espejo en el Año de ochenta y tres*, pp. 457-464, has "dieron con una Provincia, que se nombra en lengua de los naturales Zuny, y la llaman los Españoles Cibola, ay en ella cantidad de Indios . . ."

shall subsequently establish, modified the character of their dwellers.

But the information to be derived from Coronado's march, on the ethnography of New Mexico, is not confined to the above. While at Cibola, Indians from a tribe or region called "Cicuyé," which was said to be found far to the east, came to see him. They brought with them buffalo-hides, prepared and manufactured into shields and "helmets." Although the Spaniards had heard of the buffalo before reaching Zuñi, the animal itself had not been met with, and accordingly Coronado sent Hernando de Alvarado to Cicuyé, and in quest of the "buffalo country."¹

Cicuyé is the "Cicuique" of Juan Jaramillo, and the "Acuique" of an anonymous relation of the year 1541: it lay to the east of Acoma, through which the Spaniards passed.² Between it and Acoma was the pueblo of "Tiguex," at a distance of three days' march, while Cicuyé was five days from Tiguex.³ General Simpson identifies the latter with a point on the Rio Grande del Norte, "at the foot of the Socorro Mountains," and then places Cicuyé at "Pecos."⁴ Between Acoma and the Rio Grande there lies the Rio Puerco; and on its banks other authorities, conspicuous among whom is Mr. W. W. H. Davis, have located Tiguex, while Cicuyé, according to them, was on the Rio Grande, somewhere near the valley of Guadalupe.⁵ Both conclusions have their strong points; but both of them have also their weak sides.

¹ Castañeda, i. cap. xii. pp. 68, 69, 70, 71, 72, 73.

² Jaramillo, pp. 370, 371. Castañeda, p. 69.

³ Castañeda, p. 71.

⁴ *Coronado's March*, pp. 333-336.

⁵ *The Spanish Conquest of New Mexico*, cap. xxiv. p. 185, note 1; cap. xxv. p. 198, note 1; also p. 199. I attach particular importance to the opinions of Mr. Davis. He visited New Mexico at a time when it was still "undeveloped," and his writings on the country show thorough knowledge, and much documentary information. It is to be regretted that he fails absolutely to mention his sources

If it took five days of march from Zuñi to Acoma, three days more, in a northeasterly direction, would have brought the Spaniards to the Rio Grande, and certainly much beyond the Rio Puerco; and then Pecos could easily be reached in five days.¹

But we are unable to guess, even, at the length of each journey. From Zuñi to Acoma the country was uninhabited; therefore the length of each journey may have been great, because there was nothing to attract the attention of the Spaniards, — nothing to prevent them from hastening their progress in order to reach their point of destination. From Acoma on, the ethnographical character changed. The actual distance to the Rio Grande may be shorter; but pueblos sprung up at small intervals of space, which necessitated greater caution, and therefore greater delay, in the movements of the advancing party. Still, we have a guide of great efficiency in another branch of information. The pueblo of "Tiguex," mentioned as lying three days from Acoma, indicates, seemingly, a settlement of *Tehua*-speaking Indians. Now, the "Tehua" idiom is spoken in those pueblos which lie directly north of Santa Fé. San Ildefonso, San Juan, Santa Clara, Pohuaque, Nambé, and Tesuque. But it is quite ap-

in any satisfactory manner, a defect which might deprive his valuable book of much of its unquestionable reliability and importance. The attentive student, however, finds, after going seriously through the mass of material still on hand, that Mr. Davis has been so painstaking and honest, that he is very much inclined to forgive the lack of citations.

¹ From Bernalillo or Sandia, the easiest way, and the one which Alvarado, by Coronado's order, must certainly have taken, is south of Galisteo. This would have led him to Pecos, either by the Cañon de San Cristóbal or, as I presume, to the lower valley, and thence up the river to the Pueblo. Castañeda (ii. cap. v. p. 176) speaks of abandoned villages along the route. There is a ruin at the place called "Pueblo," one at San José, and another at Kingman; all along the line of the "Atchison, Topeka, and Santa Fé Railroad." I presume, therefore, that he took this route. At all events, he went *south* of the Tanos, else he would have struck the villages called later San Lázaro and San Cristóbal, both then occupied.

parent that, considering the great distance of Santa Fé from Acoma, the journeys, as indicated in Castañeda, would fall very short of any of the pueblos mentioned.¹

The Tehua, like all the tribes along the Rio Grande, suffered vicissitudes and consequent displacements; and it might be advanced that one or the other of the Tehua villages, formerly known as Tiguex, might now be destroyed.

Fortunately, we need not resort to such hypotheses. It appears, from documentary evidence of the year 1598, that there was, distinct from the Tehua or Tegua, a tribe of "Chiguas," or "Tiguas;"² and, from the notes of Father Juan Amado Niel (written between 1703 and 1710), it results that their settlements were near Bernalillo, on the Rio Grande; there

¹ The belief has been expressed to me at Santa Fé, by authority which I have learned to respect, that on the site of the present city there stood the old town of Tiguex. This belief has been strengthened by the popular tale, that the old adobe house, of two low stories, adjoining the ancient chapel of San Miguel, was an ancient Indian home. Personal inspection has, however, satisfied me of the fact that this building, while certainly very old, is certainly *not* one of an Indian "pueblo." It forms a rectangle: *Met.* 20.71' from east to west, and 4.80' from north to south. Its front has five doors, and the upper story as many windows. It is entirely of adobe, and may indeed have been an Indian house, but built after their old plan, when Santa Fé had already been founded. There is no notice of any pueblo on this site. Besides, documentary evidence regarding the establishment of Santa Fé absolutely ignores the existence of any Indian settlement at that place in 1598. Juan de Oñate, *Discurso de las Jornadas que hizo el Capitan de Su Magestad desde la Nueva-España á la Provincia de la Nuevo-Mexico*, in *Colecion de Documentos del Archivo de Indias*, vol. xvi. pp. 263-266. *Obediencia y Vasallaje á Su Magestad por los Indios de San Joan Baptista*. Id., Sept. 9, 1598, pp. 115, 116: "Al Padre Fray Cristóbal de Salazar, la Provincia de los Tepúas (*Tehuas*) con los pueblos de Triapé, Triáque el de Sant Yldefonso y Santa Clara, y este pueblo de Sant Joan Batista y el de Sant Gabriele el de Troomaxiaquino, Xiomato, Axol, Comitria, Quiotraco, y mas, la Cibdad de Sant Francisco de los Españoles, que al presente se Edifican."

² *Obediencia y Vasallaje á Su Magestad por los Indios de Santo-Domingo*. Id., p. 102. July 7, 1598. *Obediencia, etc., de S. Joan Baptista*, pp. 112, 115, "los Chiguas ó Tiguas."

being at that time three villages, the most northern of which was Santiago, the central one Puaray, near Bernalillo, and the most southern one San Pedro.¹ The distance between the first two pueblos, according to Fray Zarate Salmeron, in 1626, was about one and a half leagues, or five and a half English miles.² Tiguex, therefore, must be located on or near the site of Bernalillo. The "Rio Tiguex" of Castañeda is the Rio Grande del Norte, and the Indians of Tiguex belonged to the stock of the "Tanos" language, now spoken still by a few Indians at Galisteo, and by the inhabitants of the pueblos of Sandia and Isleta.³ Even the direction in which the Spaniards moved from Acoma — that is, to the north-east — perfectly agrees with that in which Bernalillo lies, whereas the mouth of the Rio Puerco, below which General Simpson locates Tiguex, lies southeast of the pueblo of Acoma.

Having thus, as we believe, satisfactorily located Tiguex, it is easy to locate Cicuyé. It can be nothing else than Pecos, whose aboriginal Indian name, in the Jemez language, is "Âgin," whereas Pecos is the "Paego" of the Qq'uêres idiom. There is no other Indian pueblo answering to its description and geographical location as given by the chroniclers of Coronado. The fact that "when the army quitted Cicuyé to

¹ *Apuntamientos que sobre el Terreno hizo el Padre José Amando Niel, Documentos para la Historia de México*, 3a série, vol. i. pp. 98, 99: "Estan pobladas junto á la sierra de Puruai que toma el nombre del principal pueblo que se llama así, y orilla del gran rio." There were then three pueblos: San-Pedro, "rio abajo de Puruai;" Santiago, "rio arriba." Puaray was destroyed and in ruins in 1711. It was here that Father Augustin Ruiz was killed in 1581. Fray Gerónimo de Zarate Salmeron, *Relacion*, etc., p. 10. Fray Agustin de Vetancurt, *Menologio Franciscano*, pp. 412, 413. Jean Blaeu, *Douzième livre de la Géographie Blaviane*, Amsterdam, 1667, p. 62, calls the Tiguas "Tebas," and says they had "quinze bourgades." Vetancurt, *Menologio*, but principally *Crónica de la provincia del Santo Evangelio de México*, gives the Tiguas, before 1680, the following stations and pueblos: Isleta, Alameda, Puray, and Sandia, pp. 310-313.

² *Relacion*, etc., p. 10.

³ A. S. Gatschet, *Zwölf Sprachen aus dem Südwesten Nord-Amerika's*, Weimar, 1876, p. 41.

go to Quivira, we entered the mountains, which it was necessary to cross to reach the plains, and on the fourth day we arrived at a great river, very deep, which passes also near Cicuyé,"¹ does not at all militate against it. The easiest passage, and the most accessible one from Pecos eastward, leads directly to the slopes between the Rio Gallinas and the Rio Pecos; and either of these two streams could be, and had to be, met with very near to the confluence of both.² For other proof, and very conclusive too, I refer to my detailed description of the Ruins of the Pueblo de Pecos.

I repeat, it is not to our purpose to describe the "faits et gestes" of Coronado and of his men, but only to discuss the results of his march for the Ethnography of New Mexico. I even exclude Ethnology in as far as it does not include language. The distribution of tribes and stocks of tribes designated by idioms, as Coronado revealed it in 1540 to 1543, is to be the final result of the discussion. Therefore, I leave the acts of the Spaniards aside everywhere, when they are not essential to the object, and do not even follow a strict chronological sequence.

After Alvarado had left Cibola for Tiguex, Coronado himself followed him; and, "taking the road to Tiguex," he crossed a range of mountains where snow impeded his march, — and during which march he and his men were once two and a half days without water, — until finally he reached a pueblo called "Tutahaco."³ General Simpson has not paid any attention to this place. Mr. Davis places it near Laguna.⁴ This author has forgotten that Tutahaco was further from Zuñi than Tiguex itself, since it took Coronado more than eleven days to reach it.⁵ This could not have been the case, had he

¹ Castañeda, i. cap. xix. p. 116.

² Simpson, *Coronado's March*, pp. 336.

³ Castañeda, i. cap. xiii. p. 76.

⁴ *Spanish Conquest*, cap. xxiii. p. 180, note 5, p. 181, note 6.

⁵ Castañeda, p. 76.

passed *north* of Acoma; he must consequently have passed *south* of it, and, while originally following the trail to Tiguex, deviated in a direction from N.E. to E.S.E., crossing the mountains, and then finally struck the "Tiguex" pueblos, but in their southern limits, on the Rio Grande about "Isleta."¹ Castañeda is very positive in regard to the fact that "Tutahaco" was on the same river as "Tiguex," and that from the former Coronado *ascended* the stream to the latter.² This river was the Rio Grande; and, consequently, "Tutahaco" was south of "Puaray" or Bernalillo. There, he heard of other pueblos further south still.³ "Tutahaco" was "four leagues to the south of Tiguex."⁴

When Coronado reached "Tiguex" at last, it thereafter became the centre of his operations. Castañeda very justly remarks: "Tiguex is the central point;"⁵ and a glance at the map, substituting Bernalillo for it, will at once satisfy the reader of the accuracy of this statement.

From Tiguex an expedition was sent along the Rio Grande

¹ Isleta is probably a modern *pueblo*, that is one erected since 1598 and previous to 1680, and I shall treat it as such till I am better informed. The description by Vetancurt ("*Crónica*," etc., trat. iii. cap. v. pp. 310 and 311, as in the year 1680) is characteristic: "Fórmase un río de la nieve que se derrite, que con el río Norte cercan un campo de cinco leguas. . . . Es el paso para las provincias de Acoma, Zunias, Moqui. . . ." In a straight line, the distance from Bernalillo is about twenty-five miles.

² p. 76. "Le général remonta ensuite la rivière, et visita toute la province jusqu'à ce qu'il fut arrivé à Tiguex."

³ p. 76. "Ils apprirent qu'en descendant la rivière ils trouveraient encore d'autres villages."

⁴ Castañeda, ii. cap. iv. p. 168.

⁵ Cap. vi. p. 182, part ii. In looking at the map, it will be seen that Bernalillo is, indeed, a central point. Along the Rio Grande it is almost at equal distances from Taos at the north, and Socorro at the south, whereas it is little further (in an east-westerly line) from Bernalillo to Zúñi, than from Bernalillo to the plains. The accuracy of Castañeda becomes more and more wonderful, the closer his narrative is studied and compared with the country itself. His distance exceeds the bee-line regularly almost by one-third; a very natural fact, since he computes the lengths from the routes taken.

and west of it. It discovered in succession: Quirix on the river, with seven villages; Hemes with seven villages; Aguas Calientes, three; Acha to the north-east; and, furthest in a northeasterly direction, Braba. Four leagues west of the river, Cia was met with; and, between Quirix and Cicuyé, Ximera. Further north of Quirix, Yuque-Yunque was found on the Rio Grande. An officer was also despatched to the south beyond Tutahaco, and he indeed discovered "four villages" at a great distance from the latter, and beyond these a place where the Rio Grande "disappeared in the ground, like the Guadiana in Estremadura."¹

Through our identifications of "Tiguex" with *Bernalillo*, of "Cicuyé" with *Pecos*, and "Tutahaco" with *near Isleta*, it becomes now extremely easy to locate all these pueblos in the most satisfactory manner. "Quirix" is the *Queres* district Santo-Domingo, Cochitl, etc.² "Hemes" and "Aguas Calientes," together form the *Jemez* and *San Diego* clusters of pueblos,³ "Acha" is *Picuries*, "Braba," *Taos*.⁴ The pueblo of "Ximera" between Pecos and Queres is the *Tanos* pueblo of *San Cristóbal*.⁵ "Yuque-Yunque" are the *Tehuas*, north of

¹ These facts are taken from the following passages of Castañeda: i. cap. xviii., ii. cap. vi., Quéres; i. cap. xxii., ii. cap. vi., Hemes and Aguas Calientes; ii. cap. iv., Acha; i. cap. xxii., ii. cap. vi., Braba; i. cap. xviii., Cia; ii. cap. v., Ximera; and i. cap. xxii., ii. cap. vi., Yuque-Yunque, perhaps Cuyamunque.

² Santo Domingo, Cochiti, San Felipe, Santa-Ana, and Cia are the Quéres pueblos near the Rio Grande still remaining. They all then existed in 1598. *Obediencia*, etc., á *S. Joan Baptista*, p. 113.

³ The Jemez or Emmes, in 1598, contained nine "pueblos," or rather places of habitation. *Obediencia*, etc., *de Santo Domingo*, p. 102. Niel, p. 99, mentions five.

⁴ Castañeda, i. cap. xxii. It is unmistakable. Compare Simpson, *Coronado's March*, p. 339. Vetancurt, *Crónica*, etc., p. 319. "Este es el último pueblo hácia el norte." Jean Blaeu, *Géographie*, etc., p. 62.

⁵ This is equally definite. Castañeda, ii. cap. v. p. 177. "Between Cicuyé and the province of Quirix, there exists a small very well fortified village which the Spaniards have named Ximera, and another one which appears to have been very large." This shows that the Spaniards went from Pecos by the San Cristóbal cañon.

Santa Fé,¹ and the four villages on the Rio Grande far south of Isleta, naturally are found in the now deserted towns of the "Piros" near Socorro, the most southerly and the least known of the linguistical stocks of sedentary Indians in New Mexico.²

In sending the officers mentioned along the Rio Grande, as far south as Mesilla probably, Coronado explored the territory beyond the range of the pueblos, and he thus secured information also concerning the roaming tribes. It is essential that I should touch these here also, because the subsequent history of the village Indians cannot be understood without connection with their savage surroundings. I might as well state here, that west of the Rio Grande and south of Zuñi, the entire south-west corner of New Mexico, appears to have been uninhabited in 1540. Stray hunting parties may have visited it, though there was hardly any inducement, since the buffalo was found east of the Rio Grande only, as far as New Mexico is concerned.³

The country visited along the Rio Grande, as far as Mesilla, appears not to have given any occasion for its explorers, to mention any wild tribes as its occupants. Still we know that, east of Socorro and south-east, not forty years after Coronado, the "Jumanas" Indians claimed the Eastern portions of Valencia and Socorro counties; the regions of Abo, Quarac, and Gran Quivira.⁴ These savages, also called "Rayados"

¹ To-day Tezuque, Nambé, Santa Clara, San Juan, San Ildefonso, Pojuaque, and, besides, Cuyamunque in ruins.

² The Piros were totally dispersed during the intertribal wars of 1680-89. Niel, p. 104. Senecu, near Mesilla, is a Piros pueblo, founded by Fray Antonio de Arteaga in 1630. Fray Balthasar de Medina, *Crónica de la Provincia de S. Diego de México de Religiosos Descalzos de N. S. P. S. Francisco de la Nueva-España*, México, 1682, lib. iv. cap. vii. fol. 168. Vetancurt, *Crónica*, p. 309. It is therefore a Spanish "colony," and not an original pueblo.

³ Castañeda, i. cap. ix., ii. cap. iii. iv. p. 183, vii. p. 188. Fray Marcos de Niza, pp. 274-276, Jaramillo, pp. 368, 369.

⁴ Antonio Espejo, *Viaje*, etc. Vetancurt, *Crónica*, etc., pp. 302, 303.

("Striated" from their custom of painting or cutting their faces and breasts for the sake of ornament), were reduced to villages in 1629 only, by the Franciscans; and the ruins which are now called Gran Quivira date from that time.¹ Dona Ana county was (from later reports which I shall discuss in a subsequent paper), roamed over, towards the Rio Grande, by equally savage hordes, to which Antonio de Espejo and others give the name of "Tobosas."² It is, of course, impossible to assign boundaries to the Ranges of such tribes.

Very distinct ethnographic information, however, is given by Coronado himself, as well as by Castañeda and by Jaramillo, in regard to north-eastern New Mexico. This information was secured in the year 1542, during his adventurous expedition in search of Quivira.

In regard to the route followed by him, I can but, in a general way, heartily accept the conclusions of General Simpson.³ If, in some details, we may have some doubts yet, I gladly bow to his superior knowledge of the country and to his experience of travelling in the plains, in the latter of which I am totally deficient. Coronado started from Pecos, he crossed, probably, the Tecolote chain, threw a bridge over the Rio Gallinas, and then moved on to the northeast at an unknown distance. Although not as yet satisfied that he reached as far north-east as General Simpson states, and believing that he moved more in a *circle* (as men wandering astray in the plains are apt to do), there is no doubt but that he went far into the "Indian territory,"

¹ Vetancurt, *Crónica*, etc., trat. iii. cap. iv. pp. 302, 303-305, cap. vi. pp. 324, 325.

² Espejo, *Viaje*, etc.

³ *Coronado's March*, pp. 336-339. Don José Cortes, *Memorias sobre las Provincias del Norte de Nueva-España*, 1799. MSS. of the library of Congress, fol. 87.

and that Quivira—which, by the way, is plainly described as an agglomeration of Indian “lodges” inhabited, not by sedentary Indians of the pueblo type, but by a tribe exactly similar in culture to the corn-raising aborigines of the Mississippi valley¹—was situated at all events somewhere between the Indian territory and the State of Nebraska. This is plainly confirmed by the reports of Juan de Oñate’s fruitless search of Quivira in 1599,² and principally by the statements of the Indians of Quivira themselves, when they visited that governor at Santa Fé thereafter.³ They told him that the direct route to Quivira was by the pueblo of Taos.

The Quivira of Coronado and of Oñate has therefore not the slightest connection,—and never had, with the Gran Quivira of this day, situated east of Alamillo, near the boundaries of Socorro and Lincoln Counties, New Mexico, and the ruins there;⁴ which ruins are those of a Franciscan mission founded after 1629, around whose church a village of “Jumanas” and probably “Piros” Indians had been established under direction of the fathers.

The reports of Coronado, and others, reveal to us the east and north-east of New Mexico as the “Buffalo Country,” and consequently as inhabited or roamed over by hunting savages. Of these, two tribes were the immediate neighbors of the Pueblos,—the “Teyas” to the north-east, and the “Querechos” more to the east, south of the former probably. The Ranges intermingled, and both tribes were at

¹ Coronado, Letter of Oct. 20, 1541, p. 354. Castañeda, ii. cap. viii. p. 194, Jaramillo, pp. 376, 377.

² He went from Santa Fé N.E. and E.N.E., and struck the “Escansaques:” might they have been the “Kansas?” Gerónimo de Zarate Salmeron, *Relacion*, etc., pp. 26, 27.

³ Zarate Salmeron, p. 29.

⁴ I append a valuable description of these ruins from the Surveyor-General’s office at Santa Fé, communicated to me by Mr. D. J. Miller. (See p. 30.)

war with each other. The "Teyas" were possibly Yutas,¹ as these occupied the region latterly held by the Comanches. About the "Querechos" I have, as yet, and at this distance from all documentary evidence, not a trace of information.

On the ethnographical map accompanying this sketch, I have indicated the *Apaches* as occupying *North-western New Mexico*. In this locality they were found by Juan de Oñate in 1598-99.²

Coronado's homeward march offering no new points of interest, I shall, in conclusion, briefly survey the Ethnography of New Mexico, as it is sketched on the map, and as established by the preceding investigation of the years 1540-43.

We find the sedentary Indians of New Mexico agglomerated in the following clusters: —

1. Between the frontier of Arizona and the Rio Grande, from west to east: *Zuñi*, *Acoma*, with possibly *Laguna*.

2. Along the Rio Grande, from north to south, between "Sangre de Cristo" and Mesilla: *Taos*, *Picuries*, *Tehua*, *Queres*, *Tiguas* (branch of the *Tanos*), *Piros*.

3. West of the Rio Grande valley: *Jemez*, including *San Diego* and *Cia*.

4. East of the Rio Grande: *Tanos*, *Pecos*.

Around these "pueblos," then, ranged the following wild tribes.

¹ This is made probable through the statement of Father José Amando Niel (p. 108), to the effect that the Yutas warred against the Pananas and the Jumanas. The latter were about Socorro, therefore the Yutas must have descended east to below Pecos. Their arrival east of the Sierra Madre is placed, through the reports of the Pecos, about 1530. Castañeda, ii. cap. v., p. 178.

² *Obediencia*, etc., de S. Joan Baptista, p. 113, "todos los Apaches desde la Sierra Nevada hacia la parte del Norte y Poniente," p. 114; speaking of the Jemez, "y mas, todos los Apaches y cocoyes de sus sierras y comarcas."

1. In the north-west: *Apaches*.
2. In the north-east: *Texas*.
3. North-east and east: *Querechos*.
4. South-east and south: *Fumanas, Tobosas*.

The south-west of the territory appears to have been completely uninhabited, and also devoid of the buffalo. The innumerable herds of this quadruped roamed over the plains occupying the eastern third of New Mexico and extending into Texas.

The *Moqui* of Arizona, clearly identified with Coronado's "Tusayan" are not noticed on the map, of course.

If now we compare these localities in 1540 with the present sites of the pueblos of New Mexico, it is self-evident that the Zuñi, Acoma, Tiguas, Queres, Jemez, Tehua, and Taos still occupy (Acoma excepted), if not the identical houses, at least the same tribal grounds. The Piros have removed to the frontier of Mexico, the Pecos are extinct as a tribe; of the Tanos and Picuries, a few remain on their ancient soil. Their fate is not a matter of conjecture, but of historical record.

While this discussion has proved, we believe, the truthfulness and reliability of the chroniclers of Coronado's expedition, and their great importance for the history of American aborigines, it establishes at the same time the superior advantages of New Mexico as a field for archæological and ethnological study. It is the only region on the whole continent where the highest type of culture attained by its aborigines — the village community in stone or adobe buildings — has been preserved on the respective territories of the tribes. These tribes have shrunk, the purity of their stock has been affected, their customs and beliefs encroached upon by civilization. Still enough is left to make of New Mexico the objective point of serious, practical archæologists; for, besides the

living pueblo Indians, besides the numerous ruins of their past, the very history of the changes they have undergone is partly in existence, and begins three hundred and forty years ago, with Coronado's adventurous march.¹

AD. F. BANDELIER.

SANTA FÉ, N. M., Sept. 19, 1880.

¹ In a subsequent paper, I hope to continue this "Historical Introduction," in the shape of a discussion of the various expeditions into New Mexico, and from it to other points north-west and north-east, up to the year 1605.

NOTE.

THE GRAND QUIVIRA. See p. 26.

THE following extract is from the "General Description" in the field-notes of the survey in 1872 of the base line of the public surveys in New Mexico by United States Deputy Surveyor Willison, taken from the original notes on file at the United States Surveyor General's office at Santa Fé: —

"The Gran Quivira, about which so much has been written and so many attempts made to reconcile with the city of that name spoken of by the early Spanish explorers, and which was said by them to be the seat of immense wealth, is passed through by the line in Sec. 34, range 8 East. The most prominent building is the church, which, as well as all the other buildings, is of limestone laid in mortar. The ground plan presents the form of a cross. The dimensions of the buildings are as follows: —

"Width of short arm of cross, 33 feet; width of long arm of cross, 42 feet. Their axes are respectively 48 feet long and 140.5 feet long, and their intersection 35 feet from the head of the cross. The walls have a thickness of 6 feet, and a height of about 30 feet. The main entrance has a height of 11 feet, an outside width of 11 feet, and an inside width of 16.5 feet. The church is situated due east and west, having its front to the east.

"Extending south from the church a distance of 160 feet, and connected with it by a door in the short arm of the cross, is a building containing a number of apartments. On the window-frames of this building the mark of the carpenter's scribe is still plainly visible, though doubtless exposed to the action of the atmosphere for nearly two centuries. The carved timbers in the church are still in a good state of

preservation ; a portion of the roof still remains ; some of the timbers must have weighed 3,000 pounds at the time they were brought to this place, and they could not have been procured within a less distance than sixteen miles.

“The site of the ruins is elevated about one hundred feet above the surrounding country, and embraces an area of about eighteen acres. The town has been well and compactly built, and probably contained a population approaching five thousand souls. Numerous excavations have been made by the Mexicans in search of the treasures said to have been left by the Jesuits when they were expelled by the Indians. In one of these excavations I found a large quantity of human bones, including a skull. From the formation of the latter, and its thickness, it was undoubtedly that of an Indian.

“The questions that arise in contemplating these ruins are, how was it possible for such a number of people not only to exist, but to build a town of such superior construction at a point which is now entirely destitute of water, and to which water cannot be brought from any present source, the nearest water being fifteen miles distant? what was their occupation? and what has become of them?

“That this town was the abode of Jesuit [Franciscan?] priests, and a tribe of Indians under their control, the architecture of the buildings conclusively shows.

“That they were there for agricultural and pastoral purposes I consider certain, from the fact that there are no evidences of mines, or any mineral indications of any kind in the surrounding country, and that the country, with the single exception of the absence of water, is well adapted to the mode of cultivation pursued and crops raised by the Indians.

“That water was brought there from some distant point — and distant it would have been — cannot be the case, as the face of the country would have required the construction of numerous aqueducts for its conveyance, remains of which would be found at the present time ; and why would a people bring water a long distance for the purpose of working lands no more valuable than such as could have been had at the water?

“Where, then, did the inhabitants get the water necessary for their subsistence? There are two arroyos between the ruins and the Mesa Jumanes, within a mile of the town, having well-defined watercourses,

which might have contained permanent water at the time that the town was inhabited. Even at the present time, the drainage from these arroyos furnishes water for a laguna some five miles below that lasts during about one half the year. Again, springs may have existed around the rise upon which the town is situated that, from natural causes, have become dry.

“The phenomenon of the failures of water is no uncommon one in this region, as is evidenced by the numerous vents where the surrounding rocks show the action of running water.

“A case directly supporting the assumption of the failure of the water is furnished at a place about thirty-five miles northerly from the Gran Quivira, known as ‘La Cienega.’ At this point a stream of water, furnished by two springs, and running to a distance of about a mile at all seasons of the year, which has never been known to be dry within the memory of the oldest inhabitant, has, within the last year, entirely disappeared; and even digging to a considerable depth in the bed of the late springs fails to find the stream, or the channel by which it has so mysteriously disappeared.

“To those at all familiar with the cretaceous formation of the southeastern portion of New Mexico, and who have seen the numerous rivers that flow hundreds of inches of water within a few yards of where they make their first appearance, and the total disappearance of these streams within a few miles, who have seen the water flowing in caves and subterranean streams, and the fact that the whole country is cavernous, can easily imagine the possibility of a stream acting upon its cretaceous bed, and eventually wearing a channel, to connect with some immense cavern, and disappearing at once from the surface beyond all reach of human power.

“To the south of the Gran Quivira, at a distance of about twenty miles, commences a *mal pais*, an immense bed of lava, sixty miles in length from north to south, and covering an area of five hundred square miles. To the south-west of this commences a salt marsh, which has an area of fifty square miles, and which is fed entirely by subterranean streams from the Sacramento and White Mountains, receiving without doubt by the same means the drainage of this plain for a hundred miles to the north. The above facts are, I think, sufficient to account for the absence of water at the present time near Gran Quivira.

“As to what became of the inhabitants of this place, as well as those of Abo and Quarrá to the north-west, — towns that are coeval with the Gran Quivira, — we can only conjecture. The most reasonable conclusion that can be arrived at is that they were exterminated by the Spaniards upon their reoccupation of the country. Though history is silent as to the complete operations of the Spaniards upon their return to New Mexico, yet it is a fact established by documentary evidence that a relentless war was waged against the Indians, and a number of tribes are spoken of as being engaged in certain battles, of which tribes we know nothing at the present day ; and in some instances it is stated that some tribes sued for peace, and promised obedience to the rule of the conquerors, for which they received grants of lands that they at present occupy. The inhabitants of Gran Quivira, Abo, and Quarro would be among the first that the Spaniards would meet on their reoccupation of the country, and there is every reason to believe that they were exterminated by the incensed invaders.”



